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Trust as Networking Knowledge: Precedents from Australia

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Abstract. Trust, rather than being simply a resource for establishing collaborative relationships between organizations, is an essential component of their constitution. At base, trust involves interpersonal relations of a specific type. These are relations where there is sufficient probability that a person or organization with whom one is in contact will perform an action that is beneficial, or at least not detrimental, for one to consider engaging in some form of cooperation with this person or organization in the future. Trust establishes situations in which participants in collaboration have a long-term and recurrent relationship. Where trust exists, organizations are more willing to collaborate with other organizations on a more reciprocal basis. Trust is especially important when collaboration takes place between competitors because the risk of opportunistic behaviour is higher. Where organizations share resources and information openly with other participants they will seek to reduce opportunistic behaviour through the mutual understanding and goodwill of parties. However, trust is not static; it is a dynamic process that evolves according to the development of the relationship, as one in which the more long-term the relationship, the greater the trust. In this paper, we will present the impact of trust on business networks and examine how their members developed knowledge through networking.

Keywords: trust, collaboration, networks

Introduction

Trust can be understood as "the expectation that some others in our social relationships have moral obligations and responsibility to demonstrate a special concern for other's interests above their own" (Barber, 1983). Implicit in this definition is a temporal dimension, captured by Thorelli (1986) when he considers trust to be a concept based on the confidence that relationships will continue in the future. Thus, trust implies a long-term projected future vision based on past reputation and previous performance. However, as Shaw (1997) notices, trust is not always based on past experiences.

Many scholars, from different perspectives, have written about trust. Arrow (1974) considered trust as a basic element not only for organizations but also for the economy in general, affirming that trust is a lubricant to economic exchange. As Granovetter (1985) argues, people and organizations typically seek to generate trust and discourage malfeasance. Trust is based on individual expectations of interpersonal or interorganizational relations premised on a specific kind of probability. One presupposes that organizations—as agents—will perform beneficially—or at the least will not act detrimentally to the interests one represents. On this basis we would consider engaging this agent in some form of collaboration in the future. Indeed, a synonym for trust could well be 'confidence'—that one has confidence in the actions of another agent.

According to Husted (1994) there are three different kinds of collaboration depending on the degree of trust involved in each relationship: high-trust, low-trust and zero-trust, or opportunistic, relationship. A high level of trust can be achieved in a long-term relationship where members share norms and values and where relations involve more than one aspect of the organization. As Newell and Swan (2000, p. 1288) suggest, this can give rise to particular problems at the interorganizational level, "because networks are not governed by traditional hierarchical relationship, critical problems surround the development and maintenance of trust and the deployment of power among members." Trust in collaboration places a heavy emphasis on norms of reciprocity. Larson and Starr (1993) argue that interpersonal contact and sharing of understanding of the conduct and behaviour of participants in a relationship provides a certain minimum level of understanding, giving rise to trust and reciprocity. Larson and Starr (1993) suggest that collaboration will be based on previous positive experiences with partners; thus, collaboration between competitors without prior collaborative experience could thus be very risky. Reciprocity encourages continuous collaboration when it builds social capital.

The role that trust performs

Bidault and Jarillo (1997) argue that trust can be based on different sources. *Contracts* establish a foundation for developing trust; *ethics* provides rules and values for actors to behave in different circumstances; the role of *time and experience* is important because trust increases with the number of transactions made by participants while *familiarity* relates to participants knowing each other before a transaction. (To this list Brunsson et al. (2000) would add *standards*—that where organizational action is constructed according to some standard then we can be confident about it.) However, trust is not necessarily reciprocal—parties base it on subjective evaluation. Thus, trust is specific for each participant in collaboration and cannot be interchanged, as can a good or service. It is clear that in the case of total trust between actors there is no need for contracts; thus, contracts act to shape the way participants will behave when operating in circumstances of uncertainty. The less that trust exists, the more contracts should be clear and extensive. With respect to any specific issue the rule appears to be that, the more the trust, the less contracts must be extensive. In such a situation, transaction costs are reduced. Bidault and Jarillo (1997) consider trust as a coordinating mechanism that can make transactions cheaper, in the sense that, once trust has been established, contracts will not be needed between participants.

High levels of trust lead to informal assurances buttressing, or aiding, the interpretation of formal contractual commitments, perhaps even replacing them. What are the qualities that can achieve such outcomes? At the minimum, most people would probably agree that the following qualities should be present: integrity; loyalty; competence; consistency, and openness or transparency. Wolff (1994), drawing on the experience of various practitioners, suggested several strategies, beyond professional competence, for building trust. Among these are encouraging friendship, so that individuals get to know each other over time, as well as facilitating communication by sharing information with counterparts, keeping them informed about plans. Also, one should limit management initiative through agreements in order to aid self-control and identification of possible cultural organizational barriers. There should be anticipation of disagreement by learning about the other organization, its culture and possible areas of disagreement. One should seek to avoid others being surprised: if one perceives something that can have an effect on ones partner, one should make them aware of it. Trust increases collaboration between participants when they perceive the relationship to be long-term and one in which all members will enjoy a benefit, according to their contributions to their agreement.

Collaborative agreements presume a different form of exchange from the models of economic rationalism: they suggest exchange based on trust and collaboration between participants, rather than competition. However, as Gambetta (1988, p. 215) suggests, trust is necessary for all exchange: “even to compete, in a mutually non-destructive way, one needs at some level to trust one’s competitors to comply with certain rules”. He says, trust:

> is a particular level of the subjective probability with which an agent assesses that another agent or group of agents will perform a particular action, both *before* he can monitor such action... *and* in a context in which it affects *his own* action. [W]e implicitly mean that the probability that he will perform an action that is beneficial or at least not detrimental to us is high enough for us to consider engaging in some form of cooperation with him (Gambetta, 1988, p. 217).

Trust is not static; it is a dynamic process that evolves according to the development of the relationship. Lewicki and Bunker (1996) established a model of trust in three levels linked in a sequence where, once trust has been established in one level, it moves to the next level. Those levels of trust are calculus-based, knowledge-based, and identification-based. At the calculus-based level, parties fear punishment, but also anticipate the rewards from preserving trust; in other words, trust is based on a calculus of costs and benefits. Knowledge-based trust develops over time in the permanent contact between participants; it is “grounded in the other’s predictability—knowing the other sufficiently well so that the other’s behaviour is anticipatable. Knowledge-based trust relies on information rather than deterrence” (Lewicki and Bunker, 1996, p. 121). Identification-based trust is “based on identification with the other’s desires and intentions” (Lewicki and Bunker, 1996, p. 122). At this stage, parties know each other and may anticipate the reactions of the other participant; thus, they can act for the other. Ultimately, high trust implies an expectation that a relationship will continue in the future.

Zucker (1986) argues that trust has two major components. These are *background expectations*, where things are ‘taken for granted’ because actors know each other in terms of their ‘attitude’ of daily life and reciprocity of perspectives and *constitutive expectations*, the rules defining the context of the situation in terms of independence from self-interest and intersubjective meaning. She considers the existence of three central modes of social production of trust:

Table 1. Modes of trust production.

	Basis	Source	Measures
1. Process	Tied to exchange, past or expected	Reputation, brands, gift-giving	No market; investment in trust
2. Characteristic	Tied to person, ascribed	Family background, ethnicity, gender	No market; free trust
3. Institutional	Tied to formal social structures	Signals	Active market; purchase of trust

Source: After Zucker (1986, p. 60).

(1) *process-based*, where trust is tied to past or expected exchange such as in reputation or gift-exchange; (2) *characteristic-based*, where trust is tied to the person, depending on characteristics such as family background or ethnicity; and (3) *institutional-based*, where trust is tied to formal societal structures, depending on individual or firm-specific attributes (e.g., certification as an accountant) or on intermediary mechanisms (e.g., use of escrow accounts) (Zucker, 1986, p. 60).

Zucker (1986) argues that although trust is difficult to measure it can be considered as a skill, such that each one of the modes of trust production can be measured with indicators (Table 1).

Dodgson (1994) has pointed out the negative implications of trust-based collaboration. Granstrand and Sjolander (1994) have noted the ways in which high levels of trust and collaboration within professional communities, for instance, can lead to conflict between collaborating professional groups with distinct cultural assumptions and identities. In other words, in-group social capital can have exclusionary implications for out-groups. Different 'social capital' may create inherent trust within groups it characterises but a lack of coherence when these are collaboratively connected. Social capital comprises "the norms and social relations embedded in the social structures of society that enable people to coordinate action and to achieve desired goals" (Narayan, 1999, p. 6). Burt (1992) argues that individuals have three types of capital: physical, human and social. Physical capital refers to the resources such as money and land that an individual has access to. Human capital is the personal knowledge, abilities and charisma that the individual has while working. Social capital is the network of individual contacts that the individual knows and the people known by the contacts.

Burt (1992) considers that social capital is closely related to success because those who have it obtain an additional benefit from physical and human capital by benefit of increased access, time and referrals. The benefits come from information gained through contacts. This is a very important factor because no one in an organization has access to all existing information. Related to access is the time to obtain the information. Burt (1992) argues that in general, personal contacts offer better information faster. Our contacts refer us to others and thus, in this way, give shape to our reputation. In this way, individuals with social capital are more able to succeed in their careers.

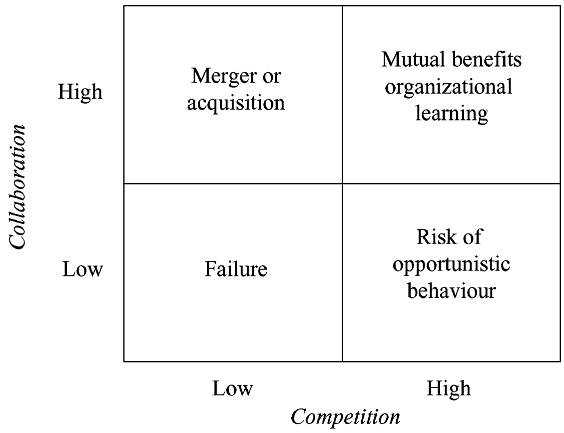
Putnam (1993) established the centrality of 'social capital' for economic success. Coleman (1990) argues that "social capital is not a private property of any of the persons that benefit from it" but a feature of the networks that bridge between them. The concept of bridging social capital has found explicit use in recent work from the World Bank: Bebbington et al. (2000) make an important distinction between *bonding* social capital (the ties within a group), and *bridging* social capital (the ties existing between different groups). Social capital not only influences policy choice, policy implementation, and market success but also people's access to resources (Portes, 1998). Thus, in operationalizing trust one must focus on relational rather than personal attributes, as well as the capacity for learning to build trust. Building trust in business means that those who would be members of some grouping founded on trust must have confidence in a number of critical areas. Amongst these are: the overall business concept; the business synergy of the participating companies; the members' ability to formalise a business model as a vehicle for winning, doing and servicing work; the business processes developed; the market opportunity; the product/service, and the proven capacity and capability of the members. If there was no trust, none of the participants would take the risk to move first, thus, collaboration would not take place, and an individualistic approach would prevail over a collective, collaborative effort.

Building collaboration in networks

Trust is a crucial element for collaboration. Where trust exists, one can propose that organizations will be more willing to collaborate with other organizations on a more reciprocal basis. Further, organizations will tend to share resources and information more openly with other participants; they will tend to reduce opportunistic behaviour through the mutual understanding and goodwill of parties. Thus, different reasons exist for establishing collaborative arrangements between organizations.

In the past, where firms needed access to resources that they did not have, economic orthodoxy suggested that they were confronted with a 'make or buy' decision (Kogut, Shan and Walker, 1992; Pyatt, 1995). Traditionally, the way organizations obtained knowledge or access to resources that they did not already make was through vertical integration, either via acquisition or through merger (Powell, 1987). Vertical integration was the most common form of organization used to obtain secure materials for production. Vertical integration was useful in slow markets where organizations did not need to adapt rapidly, when the technological change was less dynamic than in present times (Jarillo, 1993; Powell, 1987). However, when the environment is highly dynamic, organizations are forced to adopt new strategies and more flexible structures to guarantee greater adaptability to the changing conditions of the environment (Emery and Trist, 1965).

Child and Faulkner (1998, p. 1: see figure 1) claim "a cooperative strategy is the attempt by organizations to realise their objectives through cooperation with other organizations". They argue that collaboration, as well as competition, can be more or less intense between partners. One can appreciate from figure 1 that, in Child and Faulkner's (1998) terms, where both collaboration and competition are low it is most likely that the relationship will fail to achieve its goals or, at best, obtain poor results. This is the result of poor interaction



Source: After Child and Faulkner (1998: 3)

Figure 1. Alternative relationships between collaboration and competition.

between participants in any relationship. Where collaboration is low and competition high, there is increasing risk that one of the parties will act opportunistically, where, for example, a powerful member dominates the relationship. Both situations manifest a poor degree of collaboration between participants where it is likely that the relationship will terminate sooner rather than later.

There are two situations possible where collaboration is high. Where competition is low and collaboration is high, the most viable option is vertical integration, when one of the partners will integrate with the other partner through merger or acquisition. This strategy has been widely used to order relations between organizations; however, this strategy is not an option when organizations need to collaborate with other organizations. The best strategy for organizations is where both collaboration and competition are high; in such a case the major benefit is mutual learning for participants, all of which remain individual organizations collaborating in some areas of their business activities, while remaining competitors in the rest of their activities.

In collaborative interorganizational settings, trust increases where each project team is self-sufficient and includes 'outsiders' like user-representatives (Clegg, Hardy and Nord, 1996). Trust increases also when the member organizations have had previous contact. When teams have a social and celebratory dimension trust levels typically increase. Also, where project participants have prior experience with relevant technology or previous co-operative programs, it increases the probability of success in any given project. Another element that has a positive effect on trust is the intensity and duration of the relationship. According to Clegg, Hardy and Nord (1996), the more long-term the relationship the greater the trust. Following Luhmann (1979), if trust exists, people can allow themselves forms of collaboration that will help them in the rational pursuit of their interests. Thus, trust is a precondition for collaboration, but it is also a product. Therefore, trust building is an important element in collaboration. Participants must demonstrate their willingness to commit to a collaborative relationship by adapting to each of the participants. Trust is an important variable affecting the effectiveness of any relationship.

Transaction costs

Trust is an implicit concept underlying economic analysis because it determines the effectiveness of transactions. Opportunistic action reveals a lack of trust. Where trust is present in one parties' expectations of a collaboration, the presumption is typically that other parties will display non-opportunism; the assumption is that third parties will behave honestly during the transaction. Trust is understood as "the presumption that, in a situation of uncertainty, the other party even in unforeseen circumstances will act in accordance with the rules of behaviour that are deemed acceptable" (Bidault and Jarillo, 1997, p. 85). Where trust is present, Transaction Cost Economics (TCE) suggests that it can reduce the 'transaction costs' (Williamson, 1975, 1985) associated with exchange relations. According to Williamson (1975, 1981), the basics of TCE are that individuals look for efficiency and so seek to economise in their transactions. For Williamson (1981, p. 552)

> a transaction occurs when a good or service is transferred across a technologically separable interface. One stage of activity terminates and another begins. With a well-working interface, as with a well-working machine, these transfers occur smoothly. In mechanical systems we look for frictions: do the gear mesh, are the parts lubricated, is there needless slippage or other loss of energy? The economic counterpart of friction is transaction cost: do parties to the exchange operate harmoniously, or are there frequent misunderstandings and conflicts that lead to delays, breakdowns, and other malfunctions?

The assumptions of TCE include two individual behaviours. These involve assumptions that economic actors will characteristically display bounded rationality (Simon, 1947) and opportunistic behaviour. What predispose actors in their bounded rationality and opportunistic behaviour are the three other basic elements of the TCE approach: asset specificity, uncertainty, and frequency of transactions. Because of the bounded rationality of individuals, economic exchange is characteristically organized by contracts. Contracts serve to limit actor rationalities and opportunism. Such contracts can be internal (employment contracts) or external (suppliers contracts). Asset specificity refers to the assets invested or required to complete any transaction that are particular to a specific transaction and that have no alternative applications (Kalleberg et al., 1995; Kalleberg and Reve, 1993). Williamson (1981, pp. 555–556) considers that asset specificity can take various types: site specificity (identified with Thompson's 1967 description of the 'core technology'), physical asset specificity, and human asset specificity.

The TCE analysis approach is generally regarded as a theoretical model of those mechanisms that support efficient economic transactions (Heide, 1994). A central thesis of the transaction cost approach is that as the uncertainty of transactions increases—as a measure of performance—there will be a shift from markets to hierarchies to manage economic relations. According to this approach, there are certain costs associated with any transaction. In the absence of transaction costs, organizations do not need to integrate functions with other organizations and the market-based structure will be the most efficient form of relationship. In a case where transaction costs rise sufficiently, the market option is not a suitable solution; thus, organizations have to integrate functions through recourse to hierarchy. Accordingly, markets are based primarily on price mechanisms while hierarchies are based on authority.

Thompson et al. (1991) argue that the paradigm underlying transaction cost is one of competition between hierarchies and free markets in a form of 'zero-sum' game. The main question for transaction cost economics is how to differentiate opportunistic from non-opportunistic behaviours. If there is no trust between parties involved in a relationship, then contracts have to emerge. If trust exists in the relationship, then there is no need for contracts. Thus, one vital assumption of TCE concerns human nature, which is characterized as being both individualistic and opportunistic. In deciding not to act individually, individuals assume that they have no choice; untrustworthy individuals, in a world comprised of other untrustworthy individuals, must expect that their partners will behave opportunistically (Williamson, 1975).

Williamson (1975, 1985) differentiates 'hierarchies' from 'markets', identifying hierarchies (or organizations) as an alternative form for exchange or transaction, from the market, the preferred analytical object of the economics discipline. Hierarchies are a form of organization where firms tend to integrate vertically as a way to access resources. Accordingly, the market governance structure is based on prices while hierarchies are based on authority. According to Williamson (1991), 'efficiency' is the criterion that determines the desirability of outcomes as either market or hierarchy. Normally, markets are efficient and organizations are not; moreover, when markets fail organizations may prosper but, over time, "[o]rganisational failure would return to markets what market failure gave to organizations" (Ghoshal and Moran, 1996, p. 15). According to TCE, markets will fail as an organizing device, under certain conditions, including bounded rationality, opportunism, uncertainty/complexity, and small numbers. TCE has been criticized on a number of counts for embodying a hidden ideology that distorts more than it illuminates (Perrow, 1981); for being ad-hoc theorising divorced from reality (Simon, 1991); for lacking generality, because of an ethnocentric bias (Dore, 1983), as well as for ignoring the contextual grounding of human actions and, therefore, presenting an under-socialized view of human motivation and an over-socialized view of institutional control (Clegg, 1990).

Bureaucracies can also fail where there is great ambiguity and when tasks cease to be treatable as routines and become unique or exclusive. The 'clan', along the lines of Durkheim's (1933) conception of 'organic solidarity', proposed has been proposed by Ouchi (1980, p. 135) as a form of relationship appropriate for high performance ambiguity and low opportunism. The clan assumes interdependence between individuals in a relationship characterized by social mechanisms. Figure 2 presents a comparison of three different mechanisms for co-ordinating economic activity—markets, bureaucracy and clans. While reciprocity is present in all three mechanisms for co-ordinating economic activity only the clan has common values and beliefs shared by all participants; it is through this mechanism that collaboration can be achieved, according to Ouchi. While clans achieve collaboration internally, they are not externally focused—for concepts appropriate to such a focus we must turn elsewhere.

Mode of control	Normative requirements	Informational requirements
Market	Reciprocity	Prices
Bureaucracy	Reciprocity Legitimate authority	Rules
Clan	Reciprocity Legitimate authority Common values and beliefs	Traditions

Source: after Ouchi, 1980: 136

Figure 2. Ouchi's organizational failures framework.

Granovetter's (1985) critique of TCE—known as the critique from 'embeddedness'—has been particularly influential in extending the arguments concerning collaboration from an internal focus on clans to one more externally oriented to networks. He argues "that the behaviour and institutions to be analysed are so constrained by ongoing social relations that to construe them as independent is a grievous misunderstanding" (Granovetter, 1985, pp. 481–482). Accordingly, embeddedness points out the importance of personal relations, 'networks', in generating trust, compared to the institutionalized arrangement of contracts. Additionally, networks allow people to establish better communication and information based on previous experiences with the person one is dealing with. Granovetter argues that, typically, one transacts with people that one knows: all transactions, including those in business, are established within a social environment. Such an environment is influenced by connections not only between participants but also within participant organizations in such environment. Normally, we term these networks.

Networks

Various forms of network organization (Alter and Hage, 1993; Ebers, 1997; Ebers and Grandori, 1997; Ebers and Jarillo, 1997; Grandori and Soda, 1995; Jarillo, 1988; Miles and Snow, 1986; Snow, Miles and Coleman, 1992; Powell, 1987, 1991; Thorelli, 1986) should be differentiated from strategic alliances (Harrigan, 1987) and joint ventures (Harrigan, 1988). They are a unique form of collaboration, relatively recent as phenomena of explicit design, but well established in the literature. During the 60s and 70s, sociologists used networks to understand norms, exchanges and power. Since the 80s, the 'network' concept has become more fashionable in the social sciences applied to business (DeBresson and Amesse, 1991; Jarillo and Ricart, 1987; Jarillo, 1988; Nohria, 1992).

Networks have been seen as a superior form of organization for firms under those conditions of uncertainty where TCE predicts market failure (Jarillo, 1988; Limerick and Cunnington, 1993). Networks have been identified in systems and marketing (Håkansson, 1989, 1992; Forsgren et al., 1995); collaboration of small-scale enterprises and or entrepreneurship (Johannisson, 1987; Larson, 1992); industrial geography (Grabher, 1995; Piore and Sabel, 1984; Putnam, 1993), and supplier-user relationships (Burnes and New, 1997; DeBresson and Amesse, 1991; Provan, 1993; Provan and Gassenheimer, 1994). While some writers look at substantive aspects of networks (such as Ebers, 1997; Ebers and Grandori, 1997; Grandori and Soda, 1995), other researchers consider different theoretical approaches (such as Blankenburg and Johanson, 1992). Some network literature starts at the enterprise level and considers networks basically as economic relationships (Buttery, 1993; Håkansson, 1989; Johansson and Mattson, 1988, 1991). In contrast, other literature has used the network concept to address social relations among individuals (Granovetter, 1985).

Castells (1996) regards networks as a new form of paradigm: the old 'one best way' of production is being substituted by a new paradigm based on networks. He considers that "networks are the fundamental stuff of which new organizations are and will be made" (Castells, 1996, p. 168). He notes that in an era of new information technologies, a new organizational form has emerged, the 'network enterprise'. Accordingly, a network enterprise is "that specific form of enterprise whose system of means is constituted by the intersection of segments of autonomous systems of goals" (Castells, 1996, p. 171).

For the purpose of this paper, a network will be defined as a long-term relationship between organizations as actors that share resources to achieve negotiated actions for joint objectives. It should be a long-term relationship because, in the short-term, members can take advantage of other members such that the relationship will not endure. It is in the long-term that all members can benefit from the relationship, while in the short-term not all participants in the network may benefit. Shared resources are vital for establishing long-term relationships. A network can be established only when based on mutual sharing of resources. A network should thus have common goals for its members in order to achieve negotiated outcomes.

Summing up the argument thus far one can say that, in the past, the literature tended to look at the phenomena of trust as something more or less embedded, naturally, in specific social contexts and largely absent from expectations surrounding market transactions. TCE researchers tended to regard it as an aberrant business condition (despite Smith's (1910) cautions to the contrary). More recently, however, with the emergence of the importance of network concepts, both researchers and policy makers have become aware of the positive economic benefits that might flow from collaborative, trust-based relations being grafted on to the paradigm of competition. Such grafting is, of course, rather more mechanical than organic: hence it involves some directing agency. In Australia, it was the Commonwealth government that acted in this role, when it established the Australian Business Networks Program.

Australian business networks program

The use of networks as public policy instrument of the Australian Commonwealth government has to be seen in the context of the very favourable reception that Porter's (1990) work on the competitiveness of nations had in elite policy circles in Canberra. The Australian federal government launched the Business Networks Program (BNP) in May 1995 as an initiative of AusIndustry, with a budget of AU$ 25 million. "The aim of the program is to encourage businesses to cooperate in areas of strategic business, including exporting, import substitution, sharing costs for production, research and development, and marketing"

(Department of Industry, Science and Technology, 1995, p. 1). The Australian Business Networks Program made use of brokers to promote network formation. It was a requirement for admission as a network in the program to have a network broker for the two first stages of the program. Two types of brokers were used: *host brokers*, employed by organizations such as industry associations, and *private consultants*. Both groups had to undertake a short training program to become accredited as AusIndustry brokers.

To be eligible for the program, the basic requirements were that there should be at least three participants, two of which should be a small or medium size enterprise, while the third one could be a non-SME. For the purpose of this program, a small or medium size enterprise was a business with an annual turnover of less than $100 m, or less than 500 employees. Collaboration in the network had to have the intent to produce internationally traded goods or services. Participants had to agree to provide information about their individual business to the BNP and members of the network had to commit senior staff to the Network Project. Network organizations must improve collaboration in a strategic area of their business activity such as procurement, production, product or process development, distribution, domestic and/or export marketing, as well as after sales service. Members should not be currently linked in any way and should not be receiving financial support for networking from another Commonwealth or State agency.

In June 1997 major changes to the Business Network Program came into effect. The conception of a small and medium-sized enterprise was modified to include businesses with an annual turnover of less that $50 m and with less than 200 employees (Douglas, 1997, p. 16). Networks could include foreign domiciled firms as members; with the stipulation that the intended network activity was not a common practice in the sector, nor part of day-to-day-existing practice, with the requirement remaining that the network produce something of economic significance to be supported. ‘Vertical networks’, groupings along a segment of the supply chain, were not eligible for support during stage three (Douglas, 1997, p. 16).

An empirical study

Aims and data collection

A study was carried out in which questionnaire data was collected from employees of organizations that were members of networks formed as a result of the Australian Business Networks Program. Assuming that some networks were more effective than others, the aim of the study was to examine the elements effecting network effectiveness. In this paper we report on trust as it correlated with items measuring these constructs. The study aimed to measure the perceived level of trust between network members as well as other properties of the networks that the literature suggested were related to the level of trust between network members. Four hypotheses were used for the study:

Hypothesis 1. The greater the levels of trust in a network, the greater the level of collaboration among participants.

Hypothesis 2. The greater the trust, the greater the dependency on network partners.

Hypothesis 3. The greater the levels of communication, the greater the trust among network members.

Hypothesis 4. The less conflict, the greater the trust.

Issues analysed include the extent of sharing of information between network members, the extent of conflict within the network, and the readiness with which members contact other members for solutions to problems, to mention a few. The strength of the relations between the level of trust and these network characteristics will be examined.

Generating the sample for the study took a number of steps. The first was a meeting with the State Manager of the Business Networks Program in NSW, who was able to identify those business networks that were in a more advanced stage of development, and were therefore more suitable for the study. The second step was to make contact with the networks in NSW. It was a difficult task because not all networks were publicly listed as such, and the Business Networks Program, for policy reasons of protecting commercial confidence, would not release the full data set. Thirdly, was to try to access all the Business Networks in Australia that could be contacted. The list of close to 190 networks existing in Australia in December 1996 was obtained. This was a list of network names, not the network member organizations. Many of these were in the very initial stages of formation. With the use of the telephone directory, the contact numbers for 29 different networks were obtained. It was not possible to obtain the telephone number for all the networks because so many of them were at the initial steps of their formation and thus not registered in the telephone book. However, this was not a serious problem, as these would not have been useful for this research.

Those business networks whose telephone numbers we obtained were contacted to seek their support for the research. All of them agreed, in principle, to cooperate in the research. Support from the AusIndustry Business Network program to ensure participation was sought, but their policy at that time was not to support specific research. It is also important to note that the change from a federal Labor to a Coalition government caused some changes in public policy. The network program was seen as a more 'interventionist' type of industry policy than one that would be favoured by the Coalition. From the response obtained in these telephone calls, 100 questionnaires were sent to 29 different business networks all over Australia. A total of 33 were returned from a variety of different industries and sectors.

The questionnaire

The process to determine the appropriate questionnaire items began with an extensive literature search and review. This review was used to identify the characteristics of network collaboration and its forms. Based on the assessment of several frameworks, an initial set of questions to be asked was obtained. Before embarking on the constructing of a questionnaire, two pilot in-depth interviews with network members in New South Wales were conducted. These were used to develop an appropriate interview technique for open-ended, face-to-face interviews and direct field observations. In-depth interviews were open-ended, lasted one to two hours, and were carried out over a one-year period. The interviews were conducted with actors involved in the promotion, development and management of different forms of collaboration. The interviews generated feedback on the relevance of the range of questions proposed for inclusion in the questionnaire and ensured that respondents easily understood the questions. After a prototype questionnaire was developed, some items were changed from having an open-ended to a closed-ended response format. This final questionnaire contained 200 items, obtaining both qualitative and quantitative data.

For the purpose of the present paper, 16 questionnaire items were selected for analysis. These items are listed in Table 2. The first item obtains information of the extent to which respondents trust other network members. The remaining 15 items relate to aspects of networks that have been suggested in the literature as being related to the level of trust between network members. Most of these are self evident, with the exception, perhaps, of item 13, which emerges from the literature on strategic contingencies and power (Hickson et al., 1971). The presumption here is that if there is one such member, then, the network members will be overly reliant on them—and thus may either feel that they have to trust them or that because the fate of the network lies in their hands that they cannot trust them at all.

Results

Table 2 shows the means and standard deviations for each of the items used in this study. For items 1 to 10, responses were given on a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The mean score for the first item, “I always trust other network members”, equal to 3.74, is thus just above the scale midpoint of 3, indicating a general, though not strong, agreement with this statement. Similar, generally positive, responses to items 2 to 9 can also be seen, with mean scores being consistently above the scale midpoints and ranging from 3.10 for item 7 to 3.88 for item 5. For items 10 and 11, higher scores indicate a greater tendency for members to take advantage of other members and for a greater level of conflict in the network. Therefore, the relatively low mean scores for these two items (1.96 and 1.97, respectively) show a perceived general absence of these less desirable characteristics.

For items 12 to 15, with response options “Yes” and “No”, the mean scores shown in Table 2 can be interpreted as the proportion of subjects who responded “Yes”. Thus, the percentage of subjects that responded “Yes” to items 12 to 15 were 66%, 36%, 16% and 10%, respectively. Thus, a majority of respondents (66%) agreed that competitors should be admitted as members, while only a minority of respondents agreed that any particular member is critical to the network (36%), that it is difficult to raise for discussion some issues (16%) and that there were issues raised that the respondent would have preferred not to discuss (10%). For item 16, the mean score was 1.16, indicating that a tendency for responses to be towards the “Increased” end of the three-point scale. Of the 31 subjects that responded to this item, 26 responded that the level of collaboration had increased, 5 that it had remained stable, with none indicating that it had decreased.

Table 2 also shows the correlations between responses to the first item, that measures the degree of trust between network members, and responses to the remaining 15 items.

Table 2. Descriptive statistics for all variables and correlations with levels of trust.

Questionnaire items	Means	Standard deviations	Correlations with trust (Item 1)
1. I always trust other network members.	3.74	.98	
2. I am always confident that other network members will consider my point of view when making decisions in my absence.	3.56	.96	.65**
3. I am always confident that other network members will not take any decisions that will adversely affect my organization.	3.72	.94	.53**
4. In the network, members never behave opportunistically.	3.27	1.08	.65**
5. The network should discuss the existence of competition between members.	3.88	1.19	.03
6. The broker can initiate actions on behalf of the network.	3.13	1.18	−.01
7. Any member can initiate actions on behalf of the network.	3.10	1.18	.31
8. When I have a business problem, I frequently contact other network members for possible solutions.	3.61	1.28	.35
9. My organization always shares information with other network members.	3.81	1.02	.37
10. In the network, members often take advantage of other members.	1.96	.84	−.47*
11. How would you gauge the level of conflict in your network?	1.97	.82	−.48*
12. Do you think that the network should admit competitors as members?	.66	.48	−.38
13. Is there any network member whose participation is critical for the survival of the network?	.36	.49	.00
14. Are there some issues that you would like to discuss at a meeting but find difficult to raise?	.16	.37	−.54**
15. Are there any issues raised by other members that you would have preferred not to discuss?	.10	.30	.23
16. Over the life of the network, has collaboration increased, remained stable, or decreased?	1.16	.37	−.13

Notes: $^{*}p < .05$; $^{**}p < .01$.
For items 1 to 10, response scales were from 1 (strongly disagree) to 5 (strongly agree).
For item 11, response scale was from 1 (low conflict) to 5 (high conflict).
For items 12 to 15, response options were 1 (yes) and 0 (no).
For item 16, response options were 1 (increased), 2 (stable) and 3 (decreased).
Correlation shown are Spearman's rhos.

Relatively high and statistically significant positive correlations can be seen between the first item and items 2, 3 and 4. Thus the level of trust between network members was strongly correlated with the belief that other members will consider the respondent's point of view when making decisions (item 2; $r = .65$, $p < .01$), with the level of confidence that other members will not make decisions that will adversely affect the respondent's organization (item 3; $r = .53$, $p < .01$), and with the perception that network members never behave opportunistically (item 4; $r = .65$, $p < .01$). In addition, statistically significant negative correlations with the first item were obtained for items 10, 11 and 14. Thus, the level of trust between members was negatively associated with the belief that members often take advantage of each other (item 10; $r = -.47$, $p < .05$), with the perceived level of conflict in the organization (item 11; $r = -.48$, $p < .05$) and with respondents finding it difficult to raise issues for discussion (item 14; $r = -.54$, $p < .01$). We can also note the existence of a number of correlations with the first item that are above 0.3 in magnitude, but are not statistically significant (r's of .31, .35, .37 and $-.38$, for items 7, 8, 9 and 12 respectively).

Discussion

According to network members' perceptions, being involved in network relationships leads to greater levels of collaboration between the participants. While the majority of members in networks approved the inclusion of competitors as network members, a small number did not accept the idea. Being part of a network does not mean absolute trust; there are issues that organizations keep close, such as finances, copyrights and those elements considered as a core competence for the organization.

To increase the level of trust between network members, several actions are necessary. For example, it is necessary to consider the others point of view when making decisions for the network. All member organizations, in particular small-size participants, need to perceive that their opinion is important for all other members; good handling of this issue will make the relationship stronger. Members become worried about the position of the network when they are absent from the meetings for decision-making. A crucial network task is to make members feel secure that their point of view will be considered when decision-making takes place in the network, even if they are not present. It is also important to make clear for members that decisions taken in the network will never have a negative effect on their particular organization. Members regard with suspicion any action that might jeopardize their organization. Previous opportunistic behaviours by members have a negative impact on the life of the network. Thus, if there were cases in the past when members behaved opportunistically, the members have to make it very clear that the case was an exception, and that the normal condition is to share matters and raise any issue affecting the member and/or the network.

The level of conflict within a network may have a negative effect on trust among members; similarly high trust can either increase conflict—because members feel able to be more open—or reduce it because they are much more prepared to gloss the actions of other members positively. While certain levels of conflict are good in any relationship, if the level of conflict is not managed, members will tend to mistrust other participants in the network.

Thus hypothetically, the higher the level of conflict, the lower the trust. Another important element restricting trust is the difficulty some members have in raising issues for discussion. If members are aware that some questions cannot be discussed with a network member, they will restrain their participation and trust in the network. A sure sign of trust was that members believed that they could share their organizational problems with other network members. When members considered that they could trust other network members, they were still largely convinced that network members should not act alone as if they were doing so on behalf of the network: there always needs to be consultation. There was a perception that this kind of action would lead to opportunistic behaviour, which would be detrimental for the relationship. We can also note that while network members recognised the existence of moderate levels of conflict within the network, this did not mean that trust was lacking. Thus, it would be a mistake necessarily to associate harmony with trust or to see it as a precondition.

Implications

Several lessons may be derived from experiences gained in the formation and implementation of networks programs. From the point of view of an interest in trust, we appreciate that networks have increased the level of collaboration among organizations participating in the relationship. Participants considered that networks should admit competitors to the network as members and, to the extent that they did, they were able to build the basis for trustworthy collaboration within the collaborative/competitive framework. They did so largely through careful delimitation of the areas in which they competed and the areas in which they collaborated. It is always important that network members trust other participants; however trust is not blind, particularly when there are competitors in the network. Trust emerges in the long-term; networks are created for mutual benefit for all members, and it is only in the long run that participants may obtain a benefit; in the meantime it is in the daily interaction between network members that trust flourishes.

Conclusions

The research reported here suggests that applying the network concept in business is a sound way of building on, and amplifying, existing trust relations and indicates the centrality of these for success in the contemporary business world. Just as micro-economic reform processes have been oriented towards the economic basis of relations between different economic actors then the networks program may be thought of as an attempt to intervene in the social basis of these relations: building trust. These do not have to be left to the market and can be facilitated: the social basis of market relations is as evident as it is important and needs to take a more central role in public policy and in those disciplines—such as economics and management—that inform it. However, as our research attests, if the hard technologies are available, then those organizations that can embed their networks in relations built on trust will make the best use of them.

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